

BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of)	
)	
Amendment of Parts 2 and 25 of the)	
Commission's Rules to Allocate Spectrum and)	IB Docket No. 07-101
Adopt Service Rules and Procedures to Govern)	
the Use of Vehicle-Mounted Earth Stations in)	
Certain Frequency Bands Allocated to the Fixed-)	
Satellite Service)	
To: The Commission		

REPLY COMMENTS OF
MARITIME TELECOMMUNICATIONS NETWORK, INC.

Maritime Telecommunications Network, Inc. ("MTN"), by its attorneys and pursuant to Section 1.415 of the Commission's rules, 47 C.F.R. § 1.415, hereby replies to the comments filed in response to the above-captioned Notice of Proposed Rule Making proposing a regulatory framework for licensing Vehicle-Mounted Earth Stations ("VMES").¹

I. The Commission Should Acknowledge The Consensus Opinion In Favor Of Ku-Band VMES Operations, But Be Wary Of Advocates Supporting Relaxation Of Requirements Intended To Avoid Harmful Interference To The FSS.

With one limited exception, the parties to this proceeding endorse the Commission's core approach to licensing VMESs as an application of the fixed-satellite service ("FSS") in the

¹ *Amendment of Parts 2 and 25 of the Commission's Rules to Allocate Spectrum and Adopt Service Rules and Procedures to Govern the Use of Vehicle-Mounted Earth Stations in Certain Frequency Bands Allocated to the Fixed-Satellite Service*, Notice of Proposed Rule Making, FCC 07-86 (released May 15, 2007) ("VMES NPRM").

conventional Ku-band based on the Earth Stations on Vessels (“ESV”) licensing model.² The parties recognize that despite the differences distinguishing the two services, VMESs, like ESVs, can be operated in a manner that protects FSS Ku-band operations. Given the near unanimity of opinion that VMESs operating in the Ku-band is the correct regulatory course, the Commission should adopt its proposal for a primary VMES allocation in the conventional Ku-band, as well as its proposal for secondary VMES operations in the extended Ku-band.

Where the opinions of the parties to this proceeding differ is how best to protect FSS operations in the Ku-band frequencies. Some parties maintain that safeguards protecting against interference adopted in the context of ESVs – most notably, the antenna pointing accuracy requirements – are not necessary where VMESs are concerned provided the required off-axis e.i.r.p.-density limits are not exceeded.³ Other parties disagree, and maintain that the VMES technical and operations rules adopted by the Commission should adhere closely to the ESV rules, including where antenna pointing accuracy is concerned.⁴ Firmly within the latter camp is General Dynamics Corporation (“General Dynamics”), the party to this proceeding with by far the most experience with VMESs. General Dynamics’ comments are valuable because the

² Only the Association of Public Television Stations (“APTS”) and the Public Broadcasting Service (“PBS”) propose an alternative allocation for VMESs. *See* Joint Comments of The Association of Public Television Stations and The Public Broadcasting Service, IB Docket No. 07-101, at 3 (filed Aug. 17, 2007) (requesting that the Commission allocate spectrum to VMES services in the Ka-band). MTN believes that the principal concern raised by APTS and PBS in support of its allocation request – *i.e.*, interference from VMESs to incumbent users of the Ku-band – is unwarranted provided interference-avoidance requirements applied to ESVs are likewise applied to VMESs, as explained herein.

³ *See, e.g.*, Comments of SES Americom, Inc. and Americom Government Services, IB Docket No. 07-101, at 4 (filed Aug. 20, 2007) (“SES Americom Comments”).

⁴ *See, e.g.*, Comments of Maritime Telecommunications Network, Inc., IB Docket No. 07-101, at 4 (filed Aug. 17, 2007) (“MTN Comments”); Comments of General Dynamics Corporation, IB Docket No. 07-101, at 9 (filed Aug. 17, 2007) (“General Dynamic Comments”); Comments of ARINC, IB Docket No. 07-101, at 6 (filed Aug. 17, 2007).

company's unparalleled understanding of the technical nature of VMES systems confers upon them a high level of authority and credibility on the issue of interference avoidance.⁵

MTN shares General Dynamics' concern that relaxation of the antenna pointing accuracy requirements poses an unacceptable risk of interference to Ku-band FSS operations. In its comments, MTN explained that commercially available very small aperture stabilized antenna systems that are fully compliant with the ESV pointing accuracy requirements negates the need to relax those requirements simply to permit the use of even smaller diameter antenna.⁶ General Dynamics echoes this position, observing that "an exceptionally high level of antenna pointing accuracy is achievable with current technology at a cost that is acceptable to users demanding this new class of service."⁷ Given the availability of pointing accuracy-compliant antennas, MTN sees little benefit (other than cost savings) and a good deal of downside (a potential flood of less accurate antennas mounted on vehicles traversing the country) in adopting a lesser

⁵ In MTN's opinion, there is no substitute for operational experience. When the rules for ESVs were being crafted a few years ago, MTN offered numerous technical recommendations based on its extensive working knowledge of ESVs that the Commission eventually incorporated into the final ESV rules. History has proven MTN's recommendations to be highly successful. General Dynamics' recommendations regarding VMES interference avoidance should be accorded a level of deference comparable to that accorded MTN's recommendations in the ESV proceeding. However, to the extent General Dynamics (or any other party to this proceeding) recommends that VMES services be limited to governmental or military uses, MTN opposes such recommendations. With appropriate technical requirements in place to prevent harmful interference to Ku-band FSS operations, MTN believes that it can provide, and it intends to provide, VMES services to commercial customers in addition to governmental/military customers.

⁶ MTN Comments at 5-6.

⁷ General Dynamics Comments at 10.

standard of pointing accuracy. For these reasons, MTN believes the Commission should apply the ESV pointing accuracy requirements to the VMES intact.⁸

Satisfaction of the off-axis e.i.r.p.-density limits is not, as some parties suggest, a substitute for the ESV antenna pointing accuracy requirements.⁹ As MTN explained in its comments, the two rule subparts must be viewed as independent and essential components for the protection against harmful interference and not as interchangeable alternatives. General Dynamics agrees, observing correctly that only when the off-axis e.i.r.p.-density limits and the antenna pointing accuracy requirements are combined is an acceptable level of interference avoidance ensured.¹⁰ The Commission should not be swayed by those parties seeking to eliminate antenna pointing accuracy from the equation.

II. Data Logging Should Not Be Required Of Either VMESs Or ESVs.

The parties to this proceeding are split on whether VMES network licensees should be subject to the data logging requirements comparable to those imposed on ESV network licensees. Those in favor of data logging cite the need to keep track of the potentially numerous and

⁸ MTN recognizes that a commensurate reduction in power can compensate for relaxed antenna pointing. However, as General Dynamics observes, reduced power comes at the cost of reduced efficiency. General Dynamics Comments at 11. MTN does not oppose consideration of licensing for VMES operators willing to operate with reduced power and less efficiency.

⁹ *See, e.g.*, SES Americom Comments at 4 (citing comments submitted by SES Americom in RM-11336).

¹⁰ General Dynamic Comments at 12.

ubiquitous VMESs.¹¹ Those opposed to data logging cite national security concerns and the lack of need to track VMESs provided interference-avoidance measures are maintained.¹²

MTN reiterates its position that data logging should not be applied to VMESs, and that it should also be removed as a requirement of Ku-band ESV operations. The reasons supporting no data logging for VMESs, including the limited risk of interference from mobile terminals operating in the Ku-band, apply with equal force to ESVs, and cannot justify the operational burdens imposed by Section 25.222 of the Commission's rules. Neither VMESs nor ESVs should be subject to Ku-band data logging.

III. The Overly Restrictive Protections Requested By RAS Advocates Should Be Rejected.

In its comments, MTN indicated its support of coordination in the 14.47-14.5 GHz band for VMES operations in the vicinity of the radio astronomy service ("RAS") observatories.¹³ MTN clarifies that this coordination should be limited to the requirements applicable to ESVs operating within the distances of St. Croix, Virgin Islands, Mauna Kea, Hawaii, and the Arecibo Observatory on Puerto Rico set forth in Section 25.222(e) of the Commission's rules.¹⁴ Any

¹¹ See, e.g., Comments of The Boeing Company, IB Docket No. 07-101 at 27 (filed Aug. 17, 2007) ("Boeing Comments"); Comments of ViaSat, Inc., IB Docket No. 07-101, at 22 (filed Aug. 17, 2007).

¹² See, e.g., General Dynamic Comments at 39; SES Americom Comments at 4; Comments of Raysat Antenna Systems, LLC, IB Docket No. 07-101, at 13 (filed Aug. 17, 2007).

¹³ MTN Comments at 3.

¹⁴ 47 CFR § 25.222(e). MTN also believes that coordination should be conducted with the National Telecommunications and Information Agency, as it is under Section 25.222(e), and not the National Science Foundation as proposed by the Commission in 25.XXX(a)(12).

expansion of this coordination requirement would be unnecessarily restrictive of future VMES operations.

MTN thus opposes the comments of the National Academy of Sciences' Committee on Radio Frequencies ("CORF") that request a ban on VMES operation in the 14.47-14.5 GHz band.¹⁵ CORF maintains that there is "no evidence in the record that such a limitation would be technically infeasible, or even burdensome on VMES operations."¹⁶ Significantly, however, CORF does not offer any evidence demonstrating a need for the limitation either. Rather, CORF bases its request on a misreading of the Commission's rules and out of an unfounded concern over the potential effects of numerous and ubiquitous VMES earth stations.

First, CORF quotes language in Note US203 to Section 2.106 of the Commission's rules for the proposition that radio astronomy observatories should be accorded protection from interference in the 14.47-14.5 GHz band.¹⁷ But the quoted language is clearly directed to fixed and mobile services only, and not, as CORF would have the Commission believe, to satellite services. Second, CORF relies on the number and ubiquity of VMESs as justification for heightened protection of the RAS.¹⁸ In response, MTN notes that Very Small Aperture Terminals ("VSAT") are not subject to any operational prohibition within the vicinity of radio astronomy observatories, notwithstanding their very large numbers and wide-spread use. CORF

¹⁵ Comments of the National Academy of Sciences' Committee on Radio Frequencies, IB Docket No. 07-101, at 6 (filed Aug. 16, 2007).

¹⁶ *Id.*

¹⁷ *Id.* at 3, 5. The language from Note US203 that CORF quotes is "[e]very practical effort will be made to avoid the assignment of frequencies to stations in the *fixed or mobile services* in these bands." (emphasis added).

¹⁸ *Id.* at 5.

offers no adequate justification for prohibiting VMES operations in the absence of any such prohibition on VSATs. CORF's recommendation for an RAS exclusion zone should therefore be rejected.¹⁹

IV. The Commission Should Reject Boeing's Attempt To Shoehorn Its Request For A Primary AES Allocation Into The VMES NPRM.

The Commission must reject the request of The Boeing Company ("Boeing") to adopt a primary Ku-band allocation for its newly christened "aircraft-mounted earth stations."²⁰ The instant rule making is clearly not the proper proceeding for consideration of the issues raised by Boeing.

Boeing's request is a puzzling attempt to secure immediate Commission consideration of the company's newfound interest in a primary allocation for aircraft earth stations ("AES") in the Aeronautical Mobile Satellite Service ("AMSS"). The request, however, ignores (and effectively asks the Commission to ignore) a pending rule making proceeding that addresses the very issue of interest to Boeing. That proceeding, initiated by the Commission in response to a petition for rulemaking submitted by Boeing, sought comment on a regulatory framework for licensing the

¹⁹ MTN also opposes CORF's request for coordination in the 14.44-14.47 GHz band to protect the RAS observatories from VMES out-of-band emissions. *Id.* at 8. CORF fails to offer any evidence that out-of-band emissions are so harmful as to warrant the unprecedented protection that CORF seeks.

²⁰ Boeing Comments at 11, n.21.

operation of AMSS systems.²¹ As Boeing concedes in its comments here, the *AMSS NPRM* specifically asked whether AES terminals should be treated on a primary basis.²²

Now, for reasons apparently linked to concerns over the prospect of primary VMES operations, Boeing has reconsidered its commitment to secondary AMSS operations and instead favors a primary allocation. While Boeing is of course free to revise its regulatory preferences, it cannot reasonably expect, nor will the Administrative Procedure Act permit, the Commission to expand the scope of the *VMES NPRM* simply to accommodate Boeing's new priorities, particularly in the absence of any notice to the public of consideration of the issues of concern to Boeing.²³ To the extent that Boeing wishes to revisit the allocation of AES, it should do so through a petition for further rule making in the pending AMSS proceeding and not here.²⁴

²¹ See *Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service*, Notice of Proposed Rule Making, 20 FCC Rcd 2906 (2005) ("*AMSS NPRM*").

²² Boeing Comments at 15.

²³ See 5 U.S.C. § 553(b)(3); *MCI Telecommunications Corp. v. FCC*, 57 F.3d 1136, 1141 (D.C. Cir. 1995) ("Agency notice must be sufficient to fairly apprise interested parties of the issues involved, so that they may present responsive data or argument relating thereto.") (internal citation omitted); *Prometheus Radio Project v. FCC*, 373 F.3d 372, 411 (3d Cir. 2004) ("[A]gency must publish notice of either the terms or substance of the proposed rule or a description or the subjects and issues involved"). Contrary to what Boeing maintains, the Commission did not provide "adequate notice" to the public that the elevation of AMES to primary status, or that such elevation was a "foreseeable outcome" of the VMES proceeding. Boeing Comments at 13. The very limited number of references to AMSS in the *VMES NPRM* cannot reasonably be construed as providing adequate notice of potential rule changes as fundamental as adoption of a new primary allocation.

²⁴ Boeing's request is also puzzling given its timing. On August 17, 2006, Boeing announced that it would discontinue its in-flight online connectivity service, Connexion. See http://www.boeing.com/news/releases/2006/q3/060817a_nr.html (last visited August 29, 2007).

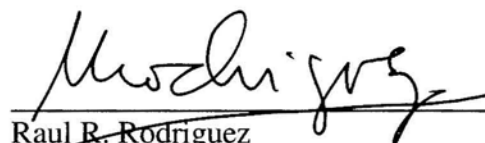
CONCLUSION

For the foregoing reasons, MTN urges the Commission to establish a regulatory framework for VMESs based on the ESV rules.

Respectfully submitted,

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